

**What is claimed is:**

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1. A method of detecting the presence of a polypeptide in a sample comprising contacting with the sample a detectable virus expressing on its surface a ligand for the polypeptide and detecting binding of the virus to the sample, thus detecting the presence of the polypeptide in the sample.

2. The method of claim 1, wherein the virus is a bacteriophage.

3. The method of claim 1, wherein the protein is a cellular protein.

4. The method of claim 1, wherein the sample is a clinical sample.

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5. A method of detecting the presence of a selected polypeptide in a sample comprising contacting with the sample a detectable virus expressing on its surface a ligand previously demonstrated to specifically bind the selected polypeptide and detecting binding of the virus to the sample, thus detecting the presence of the selected polypeptide in the sample.

6. The method of claim 5, wherein the virus is a bacteriophage.

7. The method of claim 5, wherein the protein is a cellular protein.

8. The method of claim 5, wherein the sample is a clinical sample.

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C3

9. A method of detecting the presence of a selected cellular protein on the surface of a cell comprising contacting with the cell a detectable virus expressing on its surface a ligand previously demonstrated to specifically bind the selected cellular protein and detecting binding of the virus to the cell, thus detecting the presence of the selected cellular protein on the surface of the cell.

10. The method of claim 9, wherein the virus is a bacteriophage.

11. The method of claim 9, wherein the sample is a clinical sample.
12. The method of claim 9, wherein the cellular protein is a receptor or channel protein.
13. The method of claim 9, wherein the cellular protein is N-methyl D-aspartate receptor.
14. The method of claim 9, wherein the cells are in culture.
15. The method of claim 9, wherein the cells are *in vivo*.
16. The method of claim 9, wherein the ligand expressed on the surface of the virus is selected from the group consisting of the peptide whose amino acid sequence is set forth as SEQ ID NO:2 and the peptide whose amino acid sequence is set forth as SEQ ID NO:3.
17. A method of detecting the presence of a selected polypeptide in a sample comprising contacting with the sample a detectable bacteriophage expressing on its surface at least 10 copies of a ligand for the selected polypeptide and detecting binding of the bacteriophage to the sample, thus detecting the presence of the selected polypeptide in the sample.
18. The method of claim 17, wherein the bacteriophage expresses on its surface at least 100 copies of the ligand.
19. The method of claim 17, wherein the bacteriophage expresses on its surface at least 400 copies of the ligand.
20. The method of claim 17, wherein the protein is a cellular protein.

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21. The method of claim 17, wherein the sample is a clinical sample.
22. A method of detecting the presence of a selected cellular protein on the surface of a cell comprising contacting with the cell a detectable bacteriophage expressing on its surface at least 10 copies of a ligand for the selected cellular protein and detecting binding of the bacteriophage to the cell, thus detecting the presence of the selected cellular protein on the surface of the cell.
23. The method of claim 22, wherein the bacteriophage expresses on its surface at least 100 copies of the ligand.
24. The method of claim 22, wherein the bacteriophage expresses on its surface at least 400 copies of the ligand.
25. The method of claim 22, wherein the sample is a clinical sample.
26. The method of claim 22, wherein the cellular protein is a receptor or channel protein.
27. The method of claim 22, wherein the cellular protein is N-methyl D-aspartate receptor.
28. The method of claim 22, wherein the cells are in culture.
29. The method of claim 22, wherein the cells are *in vivo*.
30. The method of claim 22, wherein the ligand expressed on the surface of the bacteriophage is selected from the group consisting of the peptide whose amino acid sequence is set forth as SEQ ID NO:2 and the peptide whose amino acid sequence is set forth as SEQ ID NO:3.

31. A method of isolating a cell expressing a selected polypeptide on its surface comprising contacting with a sample of cells a virus expressing on its surface a ligand previously demonstrated to be specific for the selected polypeptide and isolating bound virus, thereby isolating a cell expressing the selected polypeptide on its surface.
32. A method of isolating a cell expressing a selected polypeptide on its surface comprising contacting with a sample of cells a bacteriophage expressing on its surface a ligand previously demonstrated to be specific for the selected polypeptide and isolating bound bacteriophage, thereby isolating a cell expressing the selected polypeptide on its surface.
33. The method of claim 32, wherein the cell that binds the bacteriophage is isolated by a fluorescence activated cell sorter.
34. The method of claim 32, wherein the selected protein is N-methyl D-aspartate receptor and the ligand is a peptide selected from the group consisting of the peptide whose amino acid sequence is set forth as SEQ ID NO:2 and the peptide whose amino acid sequence is set forth as SEQ ID NO:3.
35. The method of claim 32, wherein the bacteriophage expresses on its surface at least 10 copies of the ligand.
36. The method of claim 32, wherein the bacteriophage expresses on its surface at least 100 copies of the ligand.
37. The method of claim 32, wherein the bacteriophage expresses on its surface at least 400 copies of the ligand.
38. A bacteriophage comprising a label such that the label can be directly detected.

39. The bacteriophage of claim 38, wherein the bacteriophage further comprises on the surface of the phage a ligand for a selected protein.
40. The bacteriophage of claim 38, wherein the label is a phosphorylation recognition site encoded by the phage and expressed on the surface of the phage.
41. The bacteriophage of claim 38, wherein the label is a biotinylation recognition site encoded by the phage and expressed on the surface of the phage.
42. The bacteriophage of claim 38, wherein the label is a chemical linkage site encoded by the phage and expressed on the surface of the phage.
43. The bacteriophage of claim 38, wherein the label is a fluorescent protein encoded by the phage and expressed on the surface of the phage.
44. The bacteriophage of claim 38, wherein the label is a radioactive moiety.